REMARKS/ARGUMENTS

The applicant acknowledges, with thanks, receipt of the Office Action that was mailed on November 19, 2007. This amendment is responsive to the November 19, 2007, Office Action.

Independent claims 1 and 11 have been amended. Claims 5, 9, 15, and 17-19 have been canceled without prejudice or disclaimer. Claims 8, 10, and 16 have been amended to change their dependencies due to claim cancellations. The subject matter of new claim 22 is not new matter, as it is disclosed in the paragraph bridging pages 7 and 8 of the original specification. The subject matter of new claim 23 is not new matter, as it is disclosed in the first paragraph of page 8. Reconsideration of this application as currently amended is requested.

Claim Rejections – 35 U.S.C. § 103

Claims 1, 5-6, 9-11, 15-16, and 21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2003/0212821 to Gillies et al. (*hereinafter* "Gillies") in view of U.S. Patent No. 7,283,525 to Burgess et al. (*hereinafter* "Burgess") and further in view of U.S. Patent No. 6,247,060 to Boucher et al. (*hereinafter* "Boucher").

Independent claims 1 and 11, as currently amended, recite an apparatus that has a switch configured for receiving a data frame from a first port for receiving and forwarding it to a selected access point on a predetermined port selected from a plurality of access points associated with a plurality of predetermined ports. A conversion circuit converts the data frame from a first protocol (e.g. 802.3) to a second protocol (e.g. 802.11). The apparatus further includes a memory mapped interface accessible to the plurality of wireless access points. The switch circuitry stores the converted data frame in a memory area of the memory mapped interface corresponding to the selected access point. The frame is retained in the memory mapped interface until the frame has been transmitted and until the media access control (MAC) processor associated with the selected wireless access point receives an acknowledgement for the frame.

A feature of the embodiments recited in claims 1 and 11 is that it enables the use of "Light access points," because some of the functionality of an access point (AP) has been moved to the switch. For example, an AP typically receives a data frame on its Ethernet port, converts

the frame to 802.11, and then transmits the frame. Often, the AP must maintain the frame in memory until an acknowledgement (ACK) is received or else the frame has to be re-transmitted. Moreover, frames for station in power save mode need to be buffered until the station is awake and can receive them. This can require large amounts of memory for each AP. By contrast, the embodiments recited in claims 1 and 11 enable a switch that is configured to a plurality of APs to receive a data frame on a first (e.g. Ethernet) port, convert the frame, and store the frame in a memory mapped interface for the AP. The AP can retrieve and transmit the frame, but does not have to maintain it in memory because the frame remains in the memory at the switch until an ACK is received by the MAC for the selected AP.

By contrast, Gillies is directed to a system and method for routing packets over wireless and wired networks. The system employs an attribute routing scheme that routes communication packets, which include objects containing network optimization parameters used to control the physical links in the network. Gillies does not convert packets received on a first port and store them in a memory mapped interface that is shared by a plurality of wireless access points. Furthermore, Gillies does not retain packets in the memory until it is sent by the access point and an ACK is received. Basically, Gillies, like any other switch, forwards the packet and forgets about it.

The aforementioned deficiency in Gillies is not remedied by any teaching of Burgess. Burgess is directed to a multi-port network communication device that includes multiple ports for the reception and transmission of addressed data packets, which include media access control address data. The device also includes a forwarding mechanism for directing packets from one port to another. The device also includes a memory for storing permitted media access control addresses. The device is capable of restricting forwarding of packets from the device in response to an examination of media access control data in the packets and the permitted media access control addresses. Thus, Burgess, like Gillies, does not convert packets received on a first port and store them in a memory mapped interface that is shared by a plurality of wireless access points. Furthermore, Burgess does not retain packets in the memory until it is sent by the access point and an ACK is received by the AP.

The aforementioned deficiencies in Gillies and Burgess are not remedied by any teaching of Boucher. The examiner states that Boucher shows a data frame remaining in memory until after the frame is transmitted and an acknowledgement is received (col. 49, lines 45-57; packet remains in memory until mfreem).

Boucher summarizes a packet after it has been validated. A network processor determines whether to send the packet along a 'slow-path' for processing by the host (col. 13, lines 27-30). A large majority of packets can avoid such sequential processing and have their data portions sent by DMA along a fast path directly to the data destination (*Id.* at lines 30-33). Basically, Boucher is a switch that either a) forwards packets without processing using DMA, or b) processes the packets (e.g. performs a protocol conversion) for routing (see also Abstract). Once the packet is routed from the host, it is not retained in memory. The packet only remains in memory while it is being processed by the host, not while waiting for an associated access point to transmit the packet and receive an acknowledgement. Thus, Boucher does not teach or suggest that a packet (even a converted packet that was processed by the host) is retained in memory until the access point transmits the packet and receives an ACK.

Claims 6, 10, and 21 directly depend from claim 1 and thus contain each and every element of claim 1 and therefore are not obvious in view of Gillies, Burgess, and/or Boucher, alone or in any combination thereof, for the reasons already set forth for claim 1. Claim 16 directly depends from claim 11 and thus contains each and every element of claim 11 and therefore is not obvious in view of Gillies, Burgess, and/or Boucher, alone or in any combination thereof, for the reasons already set forth for claim 11.

Claims 2 and 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Gillies in view of Burgess and in view of Boucher, and further in view of U.S. Patent No. 7,020,439 to Sinivaara et al. (*hereinafter* "Sinivaara"). Withdrawal of this rejection is requested for the reasons that will now be set forth.

The aforementioned deficiency of Gillies, Burgess, and Boucher noted for claims 1 and 12 are not remedied by any teaching of Sinivaara. The examiner relies on Sinivaara to show inspection circuitry and decision circuitry that is configured to block non-wireless data frames from wireless ports (Fig. 1; col. 3, lines 46-52; lines 60-65). In fact, Sinivaara actually teaches

that an access point sends a service report describing current service conditions in the access point's coverage area that is transmitted to the mobile unit, enabling the mobile unit to decide which access point to select. Claims 2 and 12 depend from claims 1 and 11, respectively, and therefore contain each and every element of claims 1 and 11, respectively; consequently, claims 2 and 12 are not obvious in view of the combination of Gilles, Burgess, Boucher, and Sinivaara. Moreover, claims 2 and 12 recite that the decision circuitry blocks non-wireless frames from wireless ports, which is not what Sinivaara teaches.

Claims 3-4, 7-8, 13-14, and 17-19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Gillies in view of Burgess and in view of Boucher, and further in view of U.S. Patent No. 7,149,213 to Rosner et al. (*hereinafter* "Rosner"). Withdrawal of this rejection is requested for reasons that will now be set forth.

The aforementioned deficiency of Gillies, Burgess, and Boucher noted for claims 1 and 12 are not remedied by any teaching of Rosner. The examiner relies on Rosner for disclosing inspection circuitry configured to determine whether a data frame is of a higher priority than another data frame (col. 8, lines 54-61) and wherein the decision circuitry is configured to grant precedence forwarding a higher priority data frame (col. 9, lines 9-13), which does not remedy the aforementioned deficiency of Gillies, Burgess, and Boucher for claims 1 and 11. Claims 3-4 and 7-8 directly depend from claim 1 and thus contain each and every element of claim 1 and, consequently, are not obvious in view of the combination Gilles, Burgess, Boucher, and/or Rosner for the reasons set forth form claim 1. Claims 13-14 and 17-19 directly depend from claim 11 and thus contain each and every element of claim 1 and, consequently, are not obvious in view of the combination Gilles, Burgess, Boucher, and/or Rosner for the reasons set forth form claim 11.

In addition to the reasons set forth above, new claim 22 recites that the switch circuitry is configured to transfer the data frame from the memory area associated with the selected access point to a second memory area corresponding to a second of the plurality of access points responsive to determining a wireless client that is to receive the data frame has roamed from the first AP to the second AP. Neither Gilles, Burgess, Boucher, Sinvaara, nor Rosner, alone or in
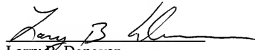
any combination, teach or suggest this feature. These switches all forward and forget the packet. Thus if a client moves, the first AP would have to route the packet through the network to the second AP, whereas in claim 22, if the client moves, the frame is merely moved from one memory area to another memory area even if the frame is already in the AP's transmit queue.

Conclusion

Withdrawal of the rejections to this application is requested for the reasons just set forth. If there are any fees necessitated by the foregoing communication, the Commissioner is hereby authorized to charge such fees to our Deposit Account No. 50-0902, referencing our Docket No. 72255/26765.

Respectfully submitted,

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